



Science Toolkit: Grade 7 Objective 4.A.1.c

Student Handout: Science: Grade 7 Objective 4.A.1.c

Standard 4.0 Chemistry

Topic A. Structure of Matter

Indicator 1. Cite evidence to support the fact that all matter is made up of atoms, which are far too small to see directly through a microscope.

Objective c. Provide evidence from the periodic table, investigations and research to demonstrate that elements in the following groups have similar properties.

Highly reactive metals, such as magnesium and sodium

Less-reactive metals, such as gold and silver

Highly reactive non-metals, such as chlorine, fluorine, and oxygen

Almost non-reactive gases, such as helium and neon

Selected Response (SR) Item

Question

Use '[The Periodic Table of the Elements](#)' and the information below to answer the following.

In class, students investigated patterns of elements in The Periodic Table of the Elements. Their teacher pointed out a few properties of some common elements. Helium is the lightest inert gas in air. Magnesium burns with a bright white flame. Gold and silver are dense metals. Table salt (sodium chloride) is a combination of two reactive elements. Some properties of common elements are shown in the data table below.

PROPERTIES OF SOME COMMON ELEMENTS

Element	Symbol	Atomic Number	State of Matter at Room Temperature
Helium	He	2	Gas
Chlorine	Cl	17	Gas
Gold	Au	79	Solid
Magnesium	Mg	12	Solid
Silver	Ag	47	Solid
Sodium	Na	11	Solid

Which of these elements is a highly reactive metal like sodium (Na)?

- A. silver (Ag)
- B. helium (He)
- C. chlorine (Cl)
- D. magnesium (Mg)

Correct Answer

D. magnesium (Mg)

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Handouts

The Periodic Table of the Elements